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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,995	07/15/2003	Myung-Sop Lee	5000-1-304	8791

33942 7590 08/08/2005

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EXAMINER	
HERRING, LISA L	
ART UNIT	**PAPER NUMBER**
1731	

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/619,995	LEE ET AL.	
	Examiner	Art Unit	
	Lisa Herring	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) *5-12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-4, in the reply filed on July 29, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The requirement is still deemed proper and is therefore made FINAL.

Specification

2. The disclosure is objected to because of the following informalities: typographical error on pg. 3 line 17 and pg. 7 line 9. "3b" has been repeated, examiner suggests changing 2nd "3b" to "3c" to match figures.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Harding (4,793,840). Harding (Figure) discloses an apparatus for drawing an optical fiber comprising:

a melting furnace (3) for melting an optical fiber preform (1)

a preform feeder (2) for feeding the preform (1) to the melting furnace (3)

a capstan (5) for drawing an optical fiber (4) by pulling the preform (1) from the melting furnace (3);

an outer diameter measurement unit (9) for measuring the outer diameter of the drawn optical fiber; and

a control unit (31) for controlling the outer diameter of the optical fiber, wherein the control unit (31) includes a calculation unit for receiving a drawing speed signal output from the capstan (5) and calculating a feed speed of the preform by disclosing a control system comprising the means for measuring the speed of the capstan and a control algorithm for comparing the measured speed with the preset speed and arranged to provide a control signal for adjusting the first rate at which the preform is fed into the furnace (see Claim 3).

Regarding claim 2, the apparatus of Harding meets the limitations of claim 2 by disclosing the electronic controller 31 takes over control of the capstan speed in response to changes in diameter represented by the deviation signal from the monitor (Col. 2 lines 40-44) and further by disclosing the following example, as soon as the commencement of any change is sensed by the monitor (9), such as an increased diameter, the controller (31) responds by making a short-term adjustment to the capstan drive (25) to increase the speed of the capstan (5) to thus tend to reduce the diameter and maintain its nominal preset value (Col. 2 lines 54-65).

Regarding claim 3, the apparatus of Harding meets the limitations of claim 3 by disclosing the following:

a stable situation exists with the capstan running at a speed slightly greater than the preset line speed and no deviation in the nominal diameter and where the capstan speed is greater than the nominal or preset speed, which has been calculated beforehand based on data derived from an earlier measurement. Thus the control algorithm functions to maintain long term control of the preform feed drive and will thus, in the situation described, attempt to increase slowly the preform feed rate to match the measured capstan speed. The capstan speed will still be subject to short-term adjustment by the diameter monitor should that sense any deviation from the preset diameter (Col. 3 lines 1-20).

In the situation above, an example of "using a calculated slope and a difference between the present drawing speed and a target drawing speed" is interpreted as being disclosed by Harding above, as the detection of the drawing speed, which for a length of time, is running at a slightly higher draw speed than the target. Further, an example of "estimating a compensation value to a difference between the present drawing speed and a target drawing speed as well as a compensation value according to a difference between the present drawing speed and the expected drawing speed of the arbitrary time later, and calculating the preform feed speed based on the estimated compensation" is interpreted as disclosed by Harding above, as the control algorithm functions to maintain long term control of the preform feed drive and this will attempt to increase slowly the preform feed rate to match the measured capstan speed.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harding (4,793,840), as applied to claim 3 above and further in view of the following discussion. Harding fails to specifically disclose wherein the previously arbitrary time period includes a period prior to automatic feed by the preform feeder. However, it is obvious that the apparatus of Harding is capable of being of performing the limitations set forth in claim 3, since it has been disclosed by Harding that a first and second predetermined feed rate during the pulling of the fiber can be controlled by apparatus (see Claim 1). Accordingly, it would have been obvious to one skilled in the art at the time the invention was made that the apparatus of Harding is capable of meeting the limitation of claim 4, since the control unit is capable of modifying the feed of the preform feeder as desired by the control algorithm.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa Herring whose telephone number is 571-272-1094. The examiner can normally be reached on Mon-Fri. 7:30 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

L. Herring

Dionne A. Walls

DIONNE A. WALLS
PRIMARY EXAMINER